



ABSTRACT of
ULTRA HIGH RESOLUTION RADAR
WITH ACTIVE ELECTRONICALLY SCANNED ANTENNA (AESA)

An ultra-high resolution radar system and technique for transmit or receive AESAs or that yields performance substantially greater than, that of conventional radar systems and techniques while being simple and inexpensive to manufacture. The device comprises the transmit/receive flat or conformal AESA or AESAs steering beam or beams non-depressively, and creating RF FM modulated pulse signals of identical shape and duration through a resistive multiport voltage divider/dividers electrically connected VCOs, RF mixers and STALO or any other narrow-band or wide-band source of RF signals, and to a plurality of radiating elements in order to generate signals providing simultaneously the required beam or beams azimuth and elevation steering electronically and receiving target-echo return pulse signals.